



CHECK OUT THE  
VIDEO ONLINE

# USER MANUAL

version 1.0



# I D A S

INTELLIGENT DRIVER ASSIST SYSTEM

**THANK YOU** for purchasing the Pantera IDAS (Intelligent Driver Assist System).  
The manual contains the functional explanation and operating method of IDAS.  
Please read the instructions carefully before attempting to operate.

The manual may be subject to change without any prior notice.

IDAS or Intelligent Driver Assistance System is an advanced safety assist system that can help a driver to realise and avoid potential risks of collisions with the utilisation of warning signals.

### **Copyright and Trademark**

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# Features

- FCW - Front Collision Warning
- LDW - Lane Departure Warning
- Beep & Watch
- DVR - Digital Video Recorder
- Full HD - Clear Display
- Touch LCD Monitor
- Event / Motion Detection CCTV Recording in Parking Mode
- Battery Discharge Prevention
- GPS Track Recording



### **Desktop Programme**

Please visit our website to get the latest version of the 'Data Manager'.

Visit: [www.rve.co.nz/idas.html](http://www.rve.co.nz/idas.html)

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# Safety Caution



## Warning!

IDAS functions are designed to assist the driver, however, it is not a substitute for careful driving and we take no responsibility for any damage caused by careless driving. Drivers should comply with local traffic regulations and should not rely on the IDAS completely but use the system to assist only.

- Do not use modified power-supply cables, use only genuine products supplied by the manufacturer. Modification may cause vehicle damage or physical injury due to explosion or fire.
- Apply only rated voltage otherwise it may cause vehicle damage or physical injury due to explosion or fire.
- Do not install product in a location where it interferes with the driver's vision.
- Do not configure the product while driving.
- Do not disconnect the power supply cable randomly as it may damage the IDAS. Contact your installer for support.
- It is important to remove the SD card and download any important data as soon as possible after an accident to avoid loss of recorded data.
- Do not use force to operate.
- Do not press the LCD display with sharp objects as it may damage the LCD surface or touch panel.
- Insert or remove the SD card only when the recording function is turned off.
- The Micro SD card is a consumable product. Errors may occur if used for long periods. It is necessary to format data and replace the SD card periodically.
- If the Micro SD card is damaged or the IDAS is powered off prematurely, it may result in accidental data loss.

- The IDAS functions only work when the speed rate received from the GPS signal exceeds the programmable minimum speed value. The IDAS functions are not a substitute for the driver's care and attention, the functions are an assistance to the driver only.
- Under the following conditions the IDAS features may not perform properly:
  - Extreme weather.
  - Extremely curved roads.
  - Roads without painted lanes.
  - When the camera image is compromised due to reflected light from an object on the dashboard.
  - When installed incorrectly.
  - When the horizon line calibration is incorrect.
- Keep the camera lens and windscreen clean to ensure clear video and proper IDAS functions.
- Tinted windscreens will effect the brightness and definition of recorded videos. The IDAS may not receive GPS signal if the windscreen has a tinted metallic film.
- Do not disassemble or modify the IDAS as it will result in data loss, damage and will void the warranty cover.

# Components



**Main Body**



**Rear Camera**



**Power-Supply and  
Signal Cable**



**Rear Camera  
Connection Cable**



**Micro SD Card**



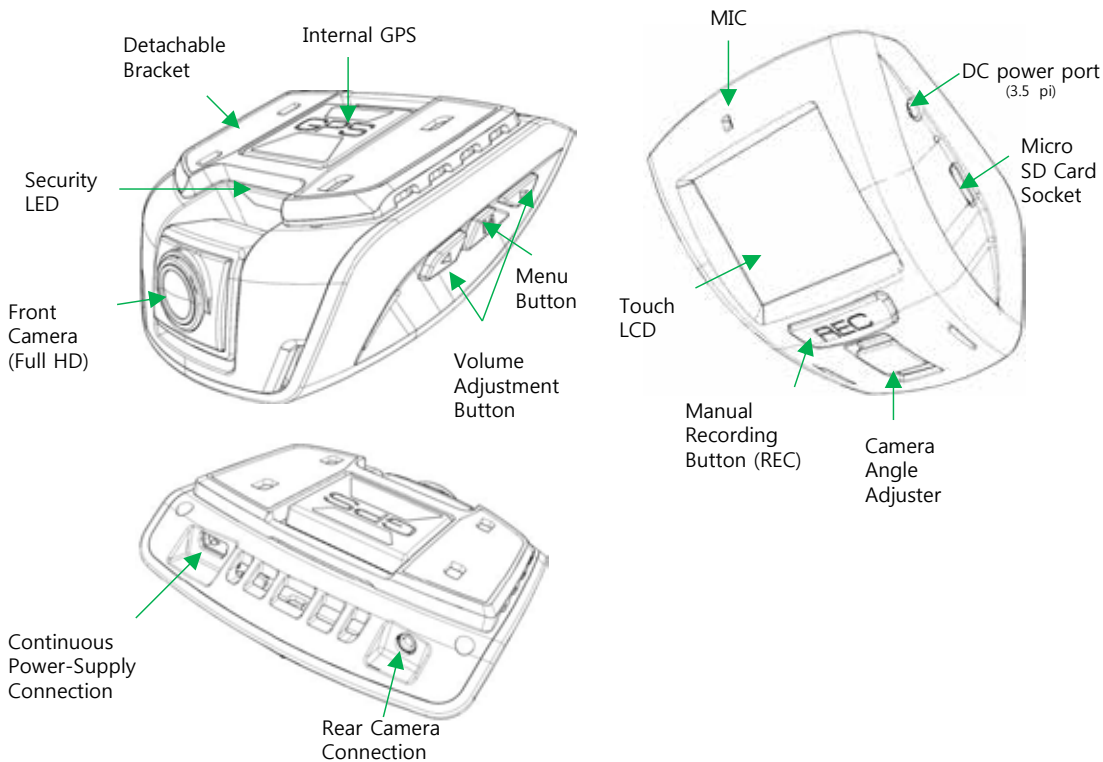
**SD Card Adapter**



**User Manual**

Specifications of the above components are subject to change according to the components supply.  
Above images are just to help user's understanding, actual components may look a little different.

# Main Body



# Rear Camera / Internal Camera



Rear Camera  
(VGA)

Integral bracket

The rear camera angle can be adjusted by rotating the main body



Indication  
LED



DC Power-supply Port



When attaching the rear camera to the rear window glass, please make sure the bracket is on the right side.

# Main Functions

## FCW (Forward Collision Warning)



1. The FCW function generates a warning signal when there is a potential risk of collision to the front of the vehicle.
2. The collision risk is evaluated through TTC ( Time To Collision ) and it is classified by 3 phases.
  - TTC : The calculated value of the distance and the relative speed between a front vehicle and the host vehicle.
  - Sensitive : TTC 0.9sec / Normal : TTC 0.7sec / Insensitive : TTC 0.5 sec
  - Secondary Warning : TTC 0.4 sec
  - The TTC sensitivity can be adjusted from the menu.
3. The FCW function works when the vehicle is moving at the speed rate above the set speed value.
  - Default Speed Setting: 30km/h
  - IDAS operating speed value can be adjusted from 20 to 80km/h in the menu.
4. The IDAS can help avoid accidents caused by careless driving behaviors such as adjusting air conditioning or other distractions.

IDAS functions are designed to assist the driver, however, it is not a substitute for careful driving and we take no responsibility for any damage caused by careless driving. Drivers should comply with local traffic regulations and should not rely on the IDAS completely but use the system to assist only.

# Main Functions

## LDW (Lane Departure Warning)



1. LDW function generates an audible signal if the vehicle departs from the lane while driving above a programmable speed.
2. LDW function works when the vehicle speed rate from the in-built GPS signal is over the set speed value.
  - Default Speed Setting : 60km/h
  - LDW activating speed can be adjusted from 40 to 80 km/h in the menu.
  - Sensitivity of LDW can be changed in the menu.
3. LDW function activates when the vehicle moves for more than 2 seconds in the lane. If the driver changes lanes consecutively, it may not generate the warning signal.
4. LDW will help avoid any lane departure accidents caused by drowsiness or carelessness on the road.

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# Main Functions

## Beep & Watch



1. Beep & Watch function is activated only when the vehicle is stationary on the road.
2. Beep & Watch can detect the movement of a vehicle in front while waiting for traffic lights to change and will inform the driver of any front movement through a warning tone.
3. Beep & Watch generates a warning tone when the host vehicle starts to move closer to the front vehicle while waiting in a traffic jam.
4. The function only activates after the speed rate from the inbuilt GPS becomes 0 .
5. Beep & Watch is a helpful function especially while waiting at traffic lights or in traffic congestion.

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# DVR (Driving Video Recorder)

1. DVR function can record data with the Full-HD front camera and the VGA rear (If equipped) internal camera.

## 2.Types of Recording

- Continuous Recording: *Records data into 'Normal' folder continuously by generating files in 30 second intervals.*
- Event Recording: *Records data automatically into the 'Event' file when a detected impact is over the set detection value.*
- Manual Recording: *Records the event data when pressing the external **REC** button.*
- Parking Event Recording Guide: *Will inform the driver the number of recorded parking events through a voice message when the ignition is turned on.*

## 3. Parking Mode

- Parking Mode is activated when the vehicle is turned off and will be deactivated while the ignition is turned on.
- If an impact is detected when parked, IDAS will record the event into an 'Event' folder.
- If motion is detected when parked it will record the video into a 'Parking' folder .
- Vehicle Protection
  - Battery Discharge Prevention: *In order to prevent battery discharge, IDAS will shut down when the vehicle voltage drops below a certain voltage.*
  - High Temperature Cut-off Function: *In order to prevent damage, the system will be automatically cut off when the internal temperature of the vehicle exceeds excessive temperature.*

# Start Process

## Booting

When the ignition is turned on, the introduction image and the loading screen will appear followed by a 'Welcome' voice message.



Intro screen



Loading

- After booting up, IDAS will start to record automatically by generating the “start recording ” voice message.

\* The loading time depends on the age and amount of data on the Micro SD card.

# Start Process








## Screen Type and Explanation

### Video Monitoring Screen



### IDAS Display screen



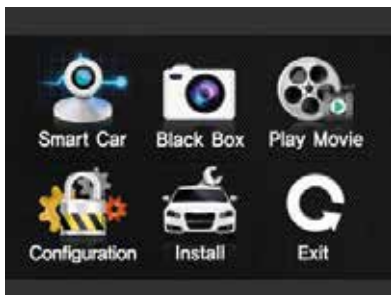
<b>· REC</b>	Shows the video is being recorded.
Centre Number	If a front vehicle is detected, it will indicate TTC. (1.2) and generates the FCW signal, the TTC will turn red.
Left Number	Shows the vehicles speed rate from the GPS signal.
	The horizon guideline.
	Shows the lane lines are being detected. When IDAS generates a LDW signal, the lane lines will turn red.
	Home Button: Switches to the main menu.
	Camera Button: Will change between Front, Rear camera views.
	Front Collision warning button: Turns ON/OFF FCW function.
	Lane Departure Warning Button: Turns ON/OFF LDW function.
	Beep and Watch Button: Turns ON/OFF Beep & Watch function.

- When the user presses the Video Monitoring Screen, it will switch to the IDAS display screen.
- IDAS display screen shows TTC information as well as the detection of a front vehicle and lane lines via UI.
- When the user presses IDAS display screen a second time the IDAS monitor will go into power-saving mode and if user presses again, it will switch to the Video Monitoring Screen.
- The DVR function works while in both screen modes.

# Manual Guide

## Basic Menu

- User can enter into each functions setting menu via the basic menu screen.



- Basic Menu screen will appear when the user presses the side 'M' button or touches the 'Home' button while viewing the video monitoring screen.
- When the user touches each icon in 'Basic Menu' it will enter into each relative setting menu.
- It is not possible to record video while in the menu mode.

1. IDAS CAM (Smart Car): Turn IDAS functions on/off and configure operations.
2. DVR (Black Box): Change basic settings, monitoring settings and resolution settings.
3. Video Play (Play Movie): View recorded videos.
4. Configuration: Change settings of system volume, voice warnings, operational configuration and format SD card.
5. Vehicle Type (Install): Configure the vehicle type and the installation position of IDAS.
6. Exit : Return to Video Monitoring screen and start video recording function.

# Manual Guide

## IDAS

■ Changing the settings of the IDAS functions



### 1. Operation Settings

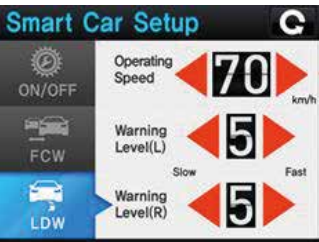
- Turns on/off each function
- Touch the button to change between on and off



### 2. FCW (Forward Collision Warning)

- Operating Speed: Press the left & right arrows to adjust.  
*Default Value is 30km/h, possible to adjust from 20 to 80km/h*
- Secondary Warning: Gives second warning at TTC 0.4. Touch button on/off.
- Warning Sensitivity: Alarm will react faster on more sensitive setting.

Sensitivity	TTC(s)	The distance with front car
Sensitive	0.9	<div></div>
Normal	0.7	<div></div>
Insensitive	0.5	<div></div>



### 3. LDW (Lane Departure Warning)

- Operating Speed: Press the left and right arrows to adjust - Default Value 60km/h. Can be changed from 40 to 80(km/h)
- Lane Warning Sensitivity: 5 is the middle (default) value, when the set value increases, the alarm will activate sooner.

# Manual Guide

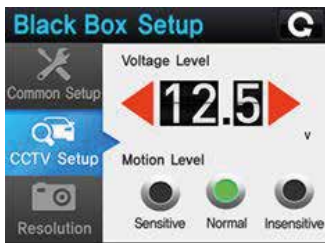
## DVR

### ■ Changing the settings of the DVR functions



#### 1. Basic Setup

- It is possible to turn continuous recording on/off.  
*(If turned off, it will record only when an impact is detected).*
- It is possible to turn voice recording on/off. *(If it is turned off, it will record video without sound).*
- Sensitivity: To adjust the impact detecting sensitivity.  
**Sensitive:** Will detect and record a minor impact.  
**Insensitive:** Will only detect and record a strong impact.



#### 2. CCTV Setup

- Discharge Prevention Voltage : In order to prevent battery discharge, IDAS will be turned off when the vehicle voltage drops below the set voltage.
- Motion Level : Adjusts motion detection sensitivity.



#### 3. Resolution

- Changes the recording resolution of the front camera.
- Stored data has allocated capacity on the micro SD card. The number of recorded files vary according to the capacity of micro SD card.

Resolution	CCTV	Event	Parking
Full HD	100min	30min	15min
HD	180min	50min	30min
VGA	700min	200min	100min

2 Channel / Micro SD card (16GB)

# Manual Guide

## Video Playback

- Playback of recorded video files from 'Continuous, Event and Parking' modes.



### 1. Continuous/ Event /Parking

- Continuous (Normal): Select and play continuously recorded files
- Event : Select and play recorded event files
- Parking (CCTV): Select and play the files recorded while parked.
- Touch to select the desired video file then press the play arrow icon to play the video
- If user presses stop button, it will return to the file selecting page.



move up and down to view more files

\* User can view recorded video files with clear definition in a wider screen via the exclusive IDAS Desktop Data Manager program.

In addition, it is possible to check acceleration data, vehicle coordinates and other information via the IDAS Desktop Data Manager program.

# Manual Guide

## Configuration

- Configure operating functions



### 1. Volume Control

- Speaker Volume Control: Controls speaker output volume (0~15)
- MIC Volume Control: Controls input of MIC volume (0~15)

### 2. Voice Alarm

Event Recording: If on, IDAS will alarm with voice announcement – ‘start event recording.’

FCW : If on, IDAS will alarm with the voice saying - ‘**Watch out**’

LDW: If on, IDAS will alarm with the voice saying - ‘be careful of your left/right lane’.

Beep & Watch: If on, IDAS will alarm with the voice saying ‘Be careful’ .

*\* Even when the voice alarms are turned off, IDAS will still alert with a beeping sound.*



### 3. Format SD card

- Deletes all the recorded files on the micro SD card by clearing up the system.

*\* Data format will delete all recorded data. Save important files separately in PC before formatting data .*

*\* User should format data via the exclusive IDAS Desktop Data Manager program or configuration menu . The usual format method may not work properly. Formatting the SD card via PC may damage recording file structure if the Data Manager program is not used.*



## Configuration cont...



### 4. System Setup

- LCD Setting: Changes the settings on the screen view and the power saving mode.
- LCD Display: Turns on/off the speed, speed unit, smart UI and the horizon line screen data.
- Language Setting: Changes LCD text and voices to different languages.
- System Info: System check and system reset function.



#### 4.1 LCD Setting

**Display View:** Sets the LCD display viewing method.

**Front:** Front camera image only. **Rear:** Rear camera image only. **PIP:** Both front and rear images at the same time.

#### LCD View

Set LCD viewing status. LCD will turn on if user touches the LCD when in the off status.

User can touch the LCD screen to switch to the power saving mode.

#### 4.2 LCD Display

- Speed: If on, the speed will show on the LCD
- Speed Unit: Select between km/h and mph.
- Smart Car: If on, the IDAS UI overlay will appear on the video display screen.
- Horizon: If on, the horizon guide line will appear on the video display screen.



## Configuration cont...



### 4.3 Language setup

- Language voice guidance and text will be in the selected language.

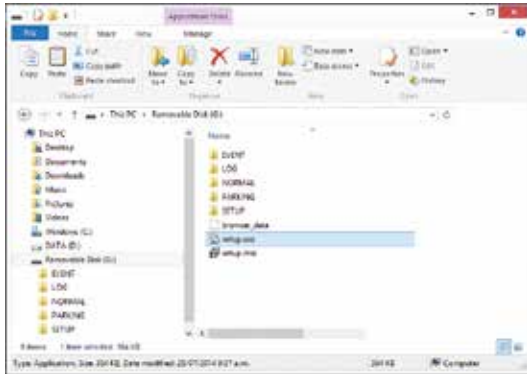


### 4.4 System Information

- Shows the version information of firmware and hardware.
- User can initialize the system by pressing the reset button.

# Data Manager

## Installation of the Data Manager Programme



Through the IDAS program, users can view HD videos on a wider screen. In addition, users can check information such as vehicle GPS data and acceleration data.

1. Insert Micro SD card into PC
2. Open the disk folder
3. Double click 'setup.exe' to install
4. Install the exclusive IDAS viewer on your PC
5. When the installation completes, the IDAS viewer program icon will appear on the desktop



### Recommended PC Specification

OS: Windows XP (32bit), Vista (32bit), Window 7 (32/64bit), Windows 8 (32/64bit)

Hardware: Pentium4 2.8GHz or above / 1G RAM or above

Internet Browser: Microsoft Internet Explorer

# Data Manager

## Screen Composition

1. Main Screen
2. Sub Screen
3. GPS location on the map
4. IDAS display screen
5. IDAS Manager menu bar
6. Video play bar
7. Video play time
8. Video volume
9. Speed indication
10. Compass
11. Recording date and GPS co-ordinates
12. Acceleration sensor data: Impact level and speed graph.
13. File list window Open/ Close button
14. File list window
15. Classification of 'Normal', 'Event' or 'Parking Modes'.




























### Desktop Programme

Please visit our website to get the latest version of the 'Data Manager'.

Visit: [www.rve.co.nz/idas.html](http://www.rve.co.nz/idas.html)

# Data Manager

## Description of Main Buttons

	Open file		IDAS manager version information
	Open SD card		Stop
	Zoom in on video playing screen		Play previous file
	Zoom out of video playing screen		Play button
	Switch between the main screen video and sub screen video		Pause
	Format SD card		Play next file
	Configuration		Normal playing speed
	Print manager screen		Quick play x2
	View acceleration/impact/ speed graph in detail		Switch between Google and naver maps
	Switching between acceleration and G-sensor buttons		CCTV file list
	Press the G-sensor impact button to change to speed button		Automatic/ Manual/ Parking event file list
	Press the speed button to change to acceleration button		Recorded Motion detection file list
	Copy the playing videos to a selected folder		

# Maintenance

## **SD Card Maintenance**

The SD card is a consumable product. If it is not maintained well, errors may occur and it may not be able to record videos properly.

## **SD Card Insert/Remove**

When inserting or removing the SD card, make sure the power is turned off.

## **Regular Data Formatting**

The SD card is a consumable product. If user formats data every 1 week or 2 weeks, it will decrease the probability of SD card errors and extend the lifecycle of the SD card.

## **SD Card Format Method**

Please format the data via the configuration setting or via the IDAS Desktop Data Manager program.

## **Regular Check**

When the video is being recorded properly, there will be a blinking REC sign on the video monitor or IDAS display mode. If the REC sign does not appear, it means there is an error in the micro SD card and the user will need to replace or format the micro SD card.

## **Data Backup**

The recorded data may be deleted as time passes. It is necessary to record important data separately or store the SD card separately.

# Troubleshooting

## **There is no power on the product**

Check the power status of vehicle battery. Start the vehicle, check the fuses.

## **The product does not boot up.**

Check SD card is inserted properly.

Is the SD card faulty? Does the SD card need formatting?

## **No sound after booting up.**

Check the volume control setting.

## **No response from the screen image.**

Is the SD card working correctly?

For product safety, the IDAS will stop recording at high temperatures. Please check the temperature of the product and vehicle.

## **IDAS functions do not work.**

Are the functions turned off in the setting menu? Check if the IDAS is receiving a GPS signal properly and the actual

speed rate is over the set warning speed threshold.

Is the vehicle type setting and the horizon calibration of the camera correct?

## **The warning timing is too slow or too fast.**

Check the horizon line and vehicle type setting.

Check sensitivity settings of each function.

## **Not possible to read Micro SD card in PC.**

Is Micro SD card adapter or reader working correctly?

Does the PC need rebooting?

## **Turn signals (Indicators)**

After installation, check side arrows in the display mode.

If the arrows are blinking, please change the high /low options in the 'Dimensions' menu.

# Setup

## Main body camera angle adjustment

1. Adjust the angle while vehicle is parked on flat ground. In order to match with the horizon correctly, it is recommended adjusting the angle when the driver has a good view of the horizon.
2. Open the camera angle adjuster cover.
3. Turn gear inside the adjuster and match the horizon guide line of LCD with the actual horizon.
4. After matching the line, close the cover to firmly fix the camera.



Open cover of camera angle adjuster and turn gear to adjust angle.



**Correct angle adjustment.**

Horizon guideline matches with the actual horizon.



**Camera angle is wrongly adjusted.**

Guideline is **above** the horizon.



**Camera angle is wrongly adjusted.**

Guideline is **below** the horizon.

Images above are just examples.

ONLY adjust the camera angle while your vehicle is parked in a safe area.

# Setup

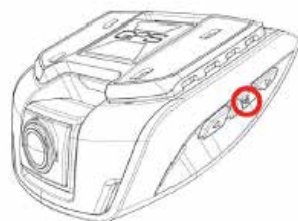
## Vehicle Type Setting

It is necessary to set 'Vehicle Type' for stable performance of IDAS functions.

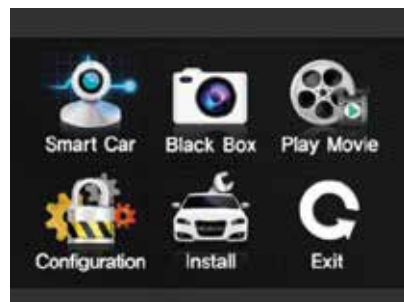
After booting up, press the side 'M' button or the 'Home' button in 'Video Monitoring Mode' to enter the menu screen.

Press the 'Install' menu.

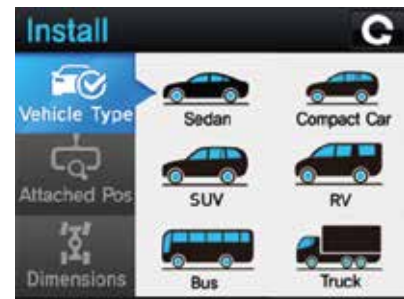
Choose driver's vehicle type in the "Vehicle Setting" menu.



Menu Button



Home Button



\* If user selects a vehicle type, the values of width and height will be automatically set in 'Dimensions' menu. For more accurate warning, it is recommended to input actual values of width or height in 'Dimensions' menu.

# Setup

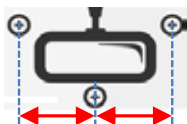
## Vehicle Type Setting

Press 'Attached To' menu button.

**Choose installation position of IDAS in menu.**

\* Attached position is based on the driver's view inside the vehicle.

\* If the product is attached to the right or left side of the windscreen, please select the applicable position and input the measured distance from the centre of the windscreen.



Attached Position (centre: 0cm)

**Press 'Dimensions' menu**

\* Please input the actually measured values of Height and Width, by pressing the left and right arrows, to perform more accurate functions.











**Turn signals (Indicators)**

After installation, check side arrows in the display mode. If the arrows are blinking, please change the high /low options in the 'Dimensions' menu.





# Installation

Basic components are for connection to continuous power-supply cable and turn signals, and should be professionally installed.

1		Clean installation surface of windscreen.
2		Remove tape off bracket and install in suitable place horizontally.
3		Arrange cables when the power supply cable is connected to DC port.
4		Find suitable installation place on rear window and wipe clean.

5		REAR CAMERA: Avoid heat wires in glass when attaching. The bracket should be on right side and preferably in an area that is cleared by the rear wiper.
6		Plug the power supply cable into DC port.
7		Connect the rear camera cable to the main body.
8		Connect power-supply cable to the vehicle wiring.

# Installation

9		Front images will appear with voice messages after booting up.
10		Adjust rear camera angle by watching rear videos.
11		Adjust settings for IDAS and DVR functions.
12		Match the horizon guide line while parked on a flat safe road.



- Make sure the power is off while connecting cables.
- Recorded image quality from rear camera may not be as good as expected due to rear window tinting.
- Rear camera bracket should be on the right side while attaching. Otherwise rear-view image will be reversed.
- The front camera is affected by reflecting light from objects on the dashboard. Do not put any objects on the dashboard, especially at night.

# Specification

Front Camera	Full HD(1920 x 1080) 100 x 82 x 42 (mm)
Rear Camera	VGA(640 x 480) 54 x 31 x 25 (mm)
LCD	2.4" QVGA TFT Panel
Recording Mode	CCTV, Event, Manual, Parking, Motion Detection
SD Card Type	Micro SDHC card Class10 (up to 32GB)
Recording Frame	Front 27fps / Rear 30fps
Video	H.264 / extension – AVI
Voice Recording	Sensitive internal condenser MIC
Operating Voltage	12V, 24V
Minimum Operating Voltage	9V
Maximum Operating Voltage	32V
Maximum Electric Consumption	5.6W
Storage Temperature	-40°C - 85°C
Operating Temperature	-20°C - 70°C
Minimum Operating Illumination	1 Lux
Weight	155 grams





# I D A S

INTELLIGENT DRIVER ASSIST SYSTEM

[www.pantera.co.nz](http://www.pantera.co.nz)



CHECK OUT THE VIDEO ONLINE

PANTERA IS REGISTERED TRADEMARK OF RETRO VEHICLE ENHANCEMENT LIMITED

[WWW.RVE.CO.NZ](http://WWW.RVE.CO.NZ)

SPECIFICATIONS ARE SUBJECT TO CHANGE

2014